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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,705	09/25/2003	Hao Chen	6695.0004-01	6343

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EXAMINER
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WHALEY, PABLO S

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/669,705	Applicant(s) CHEN ET AL.	
	Examiner Pablo Whaley	Art Unit 1631	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

**Group I:** Claims 1-8 drawn to a method of drug discovery and development, classified in class 702, subclass 019. If this Group is elected, then the below summarized specie election is also required.

**Group II:** Claims 9-18 drawn to a method of drug discovery, classified in class 702, subclass 019. If this Group is elected, then the below summarized specie election is also required.

**Group III:** Claims 19-37 drawn to a method for identifying or designing a chemical compound, classified in class 702, subclass 019. If this Group is elected, then the below summarized specie election is also required.

The inventions are distinct and divergent, each from the other because of the following reasons:

As claims 1 and 5 recite similar limitations, the search for both would not be burdensome, therefore claims 1 and 5 are considered the same "group" for purposes of examination. However, claims 1 and 5 link the inventions as set forth below.

(i) Claims 2 and 6 are directed to a method of identifying applications and uses of known compounds, which requires a different analysis, different programs, etc. than would claims 3-4 and 7-6.

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(ii) Claims 3 and 7 are directed to identification of targets (i.e. specific proteins, genes, binding sites, receptors, etc.), which is a different result than recited in claims 2, 4, 6, and 8, and would require a different set of algorithms, programs, and use of different data.

(iii) Claims 4 and 8 are directed to *in silico* identification of compounds, which is a different mode of operation than recited in claims 2, 3, 6, and 7.

The restriction requirement between the linked inventions is subject to the nonallowance of the linking claims, claims 1 and 5. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The invention of Groups I, II, and III are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Groups I, II, and III have different effects. Group I, unlike Groups II or III, is drawn to a method of drug discovery and development using databases, data analysis programs, and compounds of known activity. Group II is drawn to a method of drug discovery and does not require data analysis programs or a database. Group III, unlike Groups I or II, is

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drawn to a method for identifying or designing a chemical compound that has desired characteristics and interacts with one or more selected molecular targets. Therefore, the burden of search is maintained as the examination process requires a search of non-patent literature, U.S. patent publications, U.S. patents, as well as foreign patent literature.

### **SPECIE ELECTION REQUIREMENT**

This application contains claims directed to patentably distinct species of the claimed invention. If Group I is elected, the applicant is further required to elect a species from group A below. If Group II is elected, the applicant is further required to elect a species from EACH of groups B, C, D, and E below. If Group III is elected, the applicant is further required to elect a species from EACH of groups F, G, H, and I below.

**Specie A:** Species of properties associated with undesired activity at one or more molecular targets are cited in claim 5, which are drawn to distinct effects of compounds being developed, and thus documents undue search burden if searched together. Thus applicants are required to select ONE of the properties associated with undesired activity as specified in claim 5.

**Specie B:** Species of molecular targets are cited in claim 13, which are drawn to chemically distinct elements, and thus documents undue search burden if searched together. Thus applicants are required to select ONE of the following molecular targets as specified in claim 13: (i) receptors, (ii) enzymes, (iii) transporters, (iv) uptake sites, (v) ion channels, (vi) proteins, (vii) nucleic acids, (viii) carbohydrates, or (ix) polysaccharides.

**Specie C:** Species of disorders are cited in claim 14, which are drawn to divergent subject matter this is separately classified and published, and thus documents undue search burden if

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searched together. Thus applicants are required to select one of the following disorders as specified in claim 14: (i) cocaine addiction, (ii) attention deficit hypersensitivity disorder, (iii) Parkinson's disease, (iv) anxiety, (v) depression, (vi) obesity, or (vii) barbiturate abuse.

**Specie D:** Species of interactions are cited in claim 16, which are drawn distinct biochemical interactions that are separately classified and published, and thus documents undue search burden if searched together. Thus applicants are required to select one of the following interactions as specified in claim 16: (i) binding, (ii) interaction between a compound known to interact with a target and the target, (iii) functional activation, (iv) functional enhancement, (v) functional inhibition, or (vi) lack of function effect with respect to a molecular target.

**Specie E:** Species of descriptor types are cited in claim 17, which are drawn to distinct configurations and components, and thus documents undue search burden if searched together. Thus applicants are required to select ONE type of descriptor type as specified in claim 17.

**Specie F:** Species of chemical compounds are cited in claim 22, which are drawn to distinct chemical compounds that are separately classified and published, and thus documents undue search burden if searched together. Thus applicants are required to select ONE type of chemical compound as listed in claim 22.

**Specie G:** Species of positive targets are cited in claim 28, which are drawn to chemically distinct elements, and thus documents undue search burden if searched together. Thus applicants are required to select ONE of the following targets as specified in claim 28: (i)

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receptors, (ii) enzymes, (iii) transporters, (iv) uptake sites, (v) ion channels, (vi) proteins, (vii) nucleic acids, (viii) carbohydrates, or (ix) polysaccharides.

**Specie H:** Species of negative targets are cited in claims 29 and 30, which are drawn to chemically distinct elements, and thus documents undue search burden if searched together. Thus applicants are required to select ONE of the targets as specified in claims 29 and 30.

**Specie I:** Species of tests of interaction are cited in claims 36-37, which are drawn to divergent properties, neither of which is measureable using the same technique, and thus documents undue search burden if searched together. Thus applicants are required to select ONE of the following types of tests of interaction as specified in claims 36-37: (i) binding assay, or (ii) functional assay.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species from EACH of groups A-I above for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-4, 9-12, 19-21, 23-27, and 31-34 are generic to the above species.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the

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limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Whaley whose telephone number is (571)272-4425. The examiner can normally be reached on 9:30am through 6pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571)272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MARJORIE A. MORAN  
PRIMARY EXAMINER**

*Marjorie A. Moran*  
3/6/06